



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: John Albert Hockman

Application No.: 09/878,658

Group No.: Not yet assigned

Filed: June 11, 2001

Examiner: Not yet assigned

For: METHOD OF REDUCING VOLATILIZATION FROM AND INCREASING  
HOMOGENEITY IN GLASS

Assistant Commissioner for Patents  
Washington, D.C. 20231

ATTENTION: Group Director—

PETITION TO MAKE SPECIAL  
(37 C.F.R. 1.102 and M.P.E.P. § 708.02)

Applicant hereby petitions to make this application special under CFR § 1.102 and seeks an order to advance the examination of the application out of turn based on the following:

- (a) under § 1.102 (c) in that the invention will materially enhance the quality of the environment, and will contribute to the conservation of energy resources;
- (b) under § 1.102 (c/d) the U.S. Department of Energy, Office of Industrial Technology, (D.O.E.-O.I.T.) has identified the glass industry as one of seven industries deserving Federal Government research support in order to save energy, upgrade the environment and to increase national competitiveness in manufacturing, of which the present application relates to all three of these objectives for the glass industry; and
- (c) under § 1.102 (d) in that the conditions specified in the MANUFACTURER section of MPEP 708.02 exist.

To support this petition, applicant shows the following:

I. BACKGROUND

Applicant is Minerals Technologies Incorporated, a Delaware corporation headquartered in the Chrysler Building, New York, New York, and listed on the New York Stock Exchange under the symbol "MTX". Minerals Technologies Inc., through its subsidiary Synsil Products Incorporated, has developed an alkaline earth synthetic silicate material useful as a precursor in the manufacture of glass. Deposits of natural alkaline earth silicates are of insufficient size, purity and consistency to meet the requirements of the glass industry. Up to this time synthetic alkaline earth silicates have been too costly to be considered as a key material in glass. The present invention creates an economic source of this material of the

quality required.

Development of the market for this product has progressed to the stage of providing material sufficient to permit small commercial trials to potential customers. The advantages to the customer in the use of the synthetic silicate material are a significant increase in productivity in an industry identified by the D.O.E.-O.I.T. as deserving of support, product quality enhancement, energy savings and environmental benefits. Applicant is the assignee and present owner of the invention of the present application.

## II. IMPACT ON ENERGY CONSERVATION AND ENVIRONMENTAL QUALITY

Early tests in small scale glass melting furnaces using the technology of the present invention have demonstrated that the fuel required by a glass manufacturer to melt glass can be reduced by over 25%, thereby saving energy and conserving limited resources of natural gas. While the net energy savings (the energy saved in melting glass using the product of the present invention less the energy required to make such product) would not be anywhere near as great in larger scale more energy efficient furnaces, the energy mix effect (coal and gas versus gas) remains.

In addition to the direct impact on the energy required for glass melting, the present invention provides a secondary impact on energy through improved glass quality (fewer defects) which results in less cullet recycle (double melting). Recycle rates range from 18% to over 50% and represent an additional energy savings.

Continued development of the subject product is aimed at recapturing some of the high temperature heat at the glass-melting furnace to be used in the manufacture of synthetic silicates on site in accord with the present invention.

Combined, the above cited factors would reduce the overall energy requirement of the glass industry.

## III. INCREASE IN PRODUCTIVITY

Increased productivity in such a large and energy intensive U.S. manufacturing industry (estimated production in 1998 of 22 million tons) is deemed significant to the national interest. Increases in glass throughput in excess of 30% have been demonstrated in limited production trials which result in a significant decrease in unit cost of manufacture.


The impact on the competitiveness of the U.S. Glass Manufacturing Industry and associated employment form a second basis for approving this technology on an accelerated schedule

#### IV. PROSPECTIVE MANUFACTURE

Applicant is entitled for its application to be made special on the ground of prospective manufacture in that this petition is accompanied by:

- (a) the fee under 37 CFR 1.17 (i); and
- (b) a verified statement under NPEP 708.02, which statement is attached hereto as Exhibit A

Should there be a need for additional information or any other discussion concerning this petition, Petitioner requests that you contact Marvin J. Powell as provided below.

  
A handwritten signature in dark ink, appearing to read 'Marvin J. Powell', is written over a horizontal line.

**SIGNATURE OF PRACTITIONER**

Marvin J. Powell, Reg. No. 29,840  
For Petitioner, Minerals Technologies Inc.  
One Highland Avenue  
Bethlehem, PA 18017 United States

Tel. No.: (610) 861-3466

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**EXHIBIT A**  
**OF PETITION TO MAKE SPECIAL**  
**(37 C.F.R. 1.102 and M.P.E.P. § 708.02)**

**Verified Statement by Assignee Under MPEP 708.02 on Petition to Make Special**

I, the below signed Paul R. Saueracker, make the following declarations:

1. That I am Paul R. Saueracker, Chief Executive Officer and President of Minerals Technologies Inc.
2. That Minerals Technologies Inc. operating subsidiaries include Specialty Minerals Inc., of which I am President, and Synsil Products Inc., of which I am Chairman.
3. That Synsil Products Inc. is the prospective manufacturer which would use the invention of the present application to produce synthetic silicate material.
4. That Synsil Products Inc. has to date been able to produce such synthetic silicate trial materials in excess of 150 tons, a quantity sufficient for trials at small glass producers facilities, but insufficient to support qualification in large-scale continuous glass operations.
5. That, on information and belief, in order to conduct large-scale trials and to meet the expected market demand, Synsil Products Inc. needs to increase the present manufacturing capacity first to 35,000 tons and then to 120,000 tons.
6. That Synsil Products Inc. has committed capital to date of approximately 4.5 million dollars (\$4,500,000) to provide facilities including buildings plus machinery and equipment including tanks, mixers, piping, a large kiln, reactors, pelletizers, dryers, crushers, bagging operations and the like, which capital and facilities are sufficient to manufacture approximately 35,000 tons per year of the synthetic silicate products of the present invention.
7. That on information and belief, rapid expansion of capacity to a level of 120,000 tons per year is required in order to meet anticipated market demand. This will require additional capital

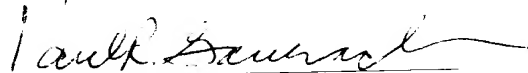
investment estimated to be in excess of fifteen million dollars (\$15,000,000).

8. That, on information and belief, unless certain that the patent will be granted, such increase will not be as extensive nor as rapid as Synsil Products Inc. presently plans in anticipation of the grant of the patent; and that upon the allowance of claims or issuance of a patent which will protect the investment of the aforesaid capital and facilities, Synsil Products Inc. obligates itself to immediately manufacture the synthetic silicate of the present invention, using the present invention, in the United States.
9. That, on information and belief, Applicant has made or caused to be made a careful and thorough search of the prior art, or has a good knowledge of the pertinent art.

As a person signing below:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

So declared this 16 day of July, 2001.



Paul R. Saueracker

\_\_\_\_\_  
Address (Street)

\_\_\_\_\_  
Town

\_\_\_\_\_  
State

Practitioner's Docket No. 01-015



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Hockman, John Albert  
Application No.: 09/878,658      Group No.: Not yet assigned  
Filed: 06/11/2001      Examiner: Not yet assigned  
For: Method of Reducing Volatilization from and Increasing Homogeneity in Glass

Assistant Commissioner for Patents  
Washington, D.C. 20231

AUTHORIZATION TO CHARGE FEES TO DEPOSIT ACCOUNT

1. Authorization to Charge Fees

The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 13-3639:

- 37 C.F.R. 1.16(a), (f) or (g) (filing fees)
- 37 C.F.R. 1.16(b), (c) and (d) (presentation of extra claims)
- 37 C.F.R. 1.16(e) (surcharge for filing fee and/or declaration on a date later than the filing date of the application)
- 37 C.F.R. 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a))
- 37 C.F.R. 1.17 (application processing fees)
- 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))

2. Status

This application is on behalf of other than a small entity.

3. Fee Payment Being Made at This Time

Petition to Make Special      \$130.00

Charge to **Deposit Account No. 13-3639** the sum of \$130.00

  
SIGNATURE OF PRACTITIONER

Reg. No. 29,840  
Tel. No.: (610) 861-3466

Marvin J. Powell  
1 Highland Avenue  
Bethlehem, PA 18017

EK793618305US

Practitioner's Docket No. DN 01-015



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EXPRESS MAIL CERTIFICATE

"Express Mail" label number EK793618305US

Date of Deposit July 16, 2001

I hereby state that the following *attached* paper(s) or fee(s)

AUTHORIZATION TO CHARGE FEES TO DEPOSIT ACCOUNT  
PETITION TO MAKE SPECIAL  
EXHIBIT A  
RETURN RECEIPT POSTCARD

are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10, on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Andrea I. Rennig